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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/861,989	05/22/1997	KELLY EUGENE DILLARD	60323	2874

7590 05/02/2002

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EXAMINER	
CARLSON, JEFFREY D	
ART UNIT	PAPER NUMBER
3622	

DATE MAILED: 05/02/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	08/861,989	DILLARD ET AL.	
	Examiner	Art Unit	
	Jeffrey D. Carlson	2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 February 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *25-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *25-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☒ The proposed drawing correction filed on *25 January 2002* is: a)☒ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. This action is responsive to the paper(s) filed 11/12/01 and 2/8/02.

Claim Objections

2. Claim 25 is objected to because of the following informalities:

- Claim 25 page 4 lines 1, 2 and 3, "GSP" should be replaced by --GPS--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. Claims 25-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claim 25 (page 4 line 2), there is no antecedent basis for "said GSP [sic] unit unique software key used to encrypt".

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 25-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Behr et al (US6107944) in view of Hornbuckle (WO 90/13865). Behr et al teaches a

method for providing software updates to mobile/remote GPS units. The remote GPS unit requests data from a base unit and the most recent maps/navigation data are transmitted to the remote unit. "The amount of information available at the remote unit can be increased by providing the remote unit with information from the base unit which is not adequately covered by any databases on-board the remote unit". [see abstract]. Behr et al recognizes the same limitations of prior art systems in which GPS/navigation units that require updates of more recent navigation/map data have to rely on distribution of floppy disk or CDs col 2 lines 18-24]. The remote units request data from the base unit which responds with the requested data. Behr et al's methods include a database of maps located at the remote GPS unit [col 21 lines 33-36]; updates to the maps and programs can be communicated from the base unit to the remote unit to provide most recent versions [col 22 lines 9-12]. The communication protocol includes features for CRC error checking, compression, as well as unitID and subscriberID information for billing purposes [col 6 lines 40-46, col 11 lines 59-65, col 12 lines 57-62, col 14 lines 1-3, 10-14]. Requests for updated navigation information are taken to inherently include payment authorization information and/or permission for charging payments. Behr et al does not teach encryption however. Hornbuckle teaches distribution of software code using encryption techniques so that the software can only be used by the intended recipient hardware. It would have been obvious to one of ordinary skill at the time of the invention to have provided such encryption techniques with the GPS remote hardware devices of Behr et al so that the data transmissions over non-secure facilities (telephone system, RF, etc) were secured and that Behr et al's

desire for sending software to paying customers is accomplished without pirating/hacking by unauthorized, non-paying customers. Hornbuckle teaches downloading a decrypting module/program along with the requested software. The decrypting module decrypts the requested software module and loads it into the internal memory of the targeted device [pg 19 lines 21-31]. The encryption/decryption module/program uses an encryption key unique to the individual target device in which the requested software is to be used [pg 20 lines 20-23]. The downloaded software package will only run on the particular target device having an encryption key corresponding to the encryption key employed by the host when the software was encrypted [pg 21 lines 15-19]. The requested software will have the decrypting program/module appended and the original software will be replaced with the encrypted software [pg 21 lines 27-30]. This appending is taken as providing the decrypting program in the footer of the transmission. It would have been obvious to one of ordinary skill at the time of the invention to have relied on and transmitted the unique GPS unitID taught by Behr et al to the base unit for encryption purposes so that the encrypted software can only be decrypted and used by the authorized device possessing the same unitID key; likewise, it would have been obvious to one of ordinary skill at the time of the invention to have verified the presence of the proper unique key in the transmission footer so that decryption can only occur properly for the intended recipient device.

Regarding the "aircraft" reference in the preamble, this is not taken to provide a positive limitation. The positive method steps set forth in the body of the claim(s) do not

require any aircraft nor do they include any aircraft-specific steps. The claimed steps can be met regardless of whether the GPS units are located in an aircraft or not. Regarding the "aeronautical navigation data", the maps and other geographic information of Behr et al are capable of serving as "aeronautical navigation data". Aeronautical navigation can be accomplished by using maps of highways, rivers, buildings, etc. Further any differences in the data content of Behr et al and the "aeronautical navigation data" are only found in the nonfunctional descriptive material and are not functionally involved in the method (or structurally programmed) steps recited. The steps would be performed the same regardless of data content. Thus, this descriptive material will not distinguish the claimed invention from the prior art in terms of Patentability, see *In re Gulack*, 703 F.2d 1381, 217 USPQ 401, 404 (Fed. Cir. 1983); *In re Lowry*, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994). Therefore, it would have been obvious to one of ordinary skill at the time of the invention to have transmitted any type of data content. Such data content does not functionally relate to the steps and the subjective interpretation of the data content does not patentably distinguish the claimed invention.

It would have been obvious to one of ordinary skill at the time of the invention to have employed any well known encryption techniques, including CRC encryption using the unique unitID as a seed. Any encryption technique could have been used to secure the transmission and such selection of techniques is not critical to the invention.

Response to Arguments

6. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- JP08305282A, JP06308218A (Eshita) and JP08095488A (Sakoguchi) each teach GPS navigation systems that communicate with a central data server for map updates.
- Ellis et al (US5699255) teaches a GPS that receives updated map information on demand through a communication channel. The user pays for the requested map data.
- Koopman Jr. et al (US5649014) teaches particular CRC encryption techniques.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey D. Carlson whose telephone number is 703-308-3402. The examiner can normally be reached on 8:30-6p, off on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Stamber can be reached on 703-305-8469. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-6606 for regular communications and 703-305-6606 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Jeffrey D. Carlson
Examiner
Art Unit 2162

jdc
April 18, 2002